

REMARKS

Claims 1-13, 15-17, and 22 are pending in the application. Claims 1-13, 15-17, and 22 stand rejected. By the present amendment, claims 1, 3, 5, and 8 have been amended. The Examiner's reconsideration of the rejection in view of the above amendments and the following remarks is respectfully requested.

Claim Rejections- 35 U.S.C. § 103(a):

Claims 1, 2, 4-7, 9-17, and 22 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Calvert et al. (U.S. 6,348,240) in view of applicants' admitted prior art. Claim 3 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Calvert et al. (U.S. 6,348,240) in view of the prior art as applied to claims 1, 2, 4-7, 9-17, and 22 above, and further in view of Schnur et al. (U.S. 5,079,600). Claim 8 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Calvert et al. (U.S. 6,348,240) in view of the prior art and Nagura (U.S. 5,841,856).

Claims 1, 3, 5, and 8 have been amended to further define the invention. The amendment to claims 1, 3, 5, and 8 is supported in the specification, for example, on page 10, lines 3-10, and page 11, lines 9-11.

With respect to claims 1, 15, and 22, claims 1, 15, and 22 recite, *inter alia, a method for forming an electrically conductive layer having patterns for semiconductor devices, comprising the steps of forming a non-functional insulation layer on the substrate...forming a functional insulation layer on the non-functional insulation layer, the functional insulation layer having predetermined functional groups.*

Examiner contends on pages 2-3 of the Office Action that Calvert discloses forming a

non-functional insulation layer on a substrate, wherein said layer is a diamond layer, and forming a functional insulation layer on the non-functional insulation layer, the insulation layer having predetermined functional groups. The Examiner also contends that the diamond layer or substrate is a non-functional layer (Col. 7, lines 17-20). Applicants respectfully disagree.

Calvert discloses oxidizing a diamond substrate or layer, attaching functional groups to the substrate or layer, depositing a mask after the functional groups have been attached, modifying the surface through the mask to pattern the surface after the functional groups have been attached, catalyzing the remaining functionalized surface, then treating with an electroless plating solution to metallize the surface (see Abstract; Figure 1; Col. 5-, line 15 - Col. 7, line 40).

Calvert discloses that the diamond substrate, or diamond layer, is oxidized and functional groups are attached to the diamond surface, a mask is then formed and patterned on the diamond surface to modify the surface after the functional groups have been attached, and the remaining functional diamond surface is catalyzed to facilitate metallizing the surface. In other words, Calvert's diamond surface is a functional layer, and not a non-functional layer. Thus, Calvert does not disclose or suggest forming a non-functional layer on the substrate, much less forming a functional insulating layer having predetermined functional groups on the non-functional insulating layer.

Since Calvert does not disclose or suggest the claim limitations as contended by the Examiner, Applicants respectfully submit that Calvert does not disclose or suggest a method for forming an electrically conductive layer having patterns for semiconductor devices, *inter alia*, comprising the steps of forming a non-functional insulation layer on the substrate...forming a functional insulation layer on the non-functional insulation layer, the functional insulation layer having predetermined functional groups, as essentially claimed in claims 1, 15, and 22.

Further, Applicants' admitted prior art does not cure the deficiencies of Calvert. Namely, it does not suggest or disclose a method for forming an electrically conductive layer having patterns for semiconductor devices, *inter alia, comprising the steps of forming a non-functional insulation layer on the substrate...forming a functional insulation layer on the non-functional insulation layer, the functional insulation layer having predetermined functional groups*, as essentially claimed in claims 1, 15, and 22.

Therefore, claims 1, 15, and 22 are believed to be patentably distinct and non-obvious over Calvert and the Applicants' admitted prior art in the instant application because the combination of the above cited references fails to teach or suggest all the claim limitations of the claimed invention for at least the reasons as stated above.

Further, claims 2-13, depend from claim 1, and claims 16-17 depend from claim 15. As such, these claims are believed to be patentable for at least the reasons given for claims 1 and 15. Withdrawal of the claims rejection is respectfully requested.

In view of the foregoing remarks and amendments, it is respectfully submitted that all the claims now pending in the application are in condition for allowance. Early and favorable consideration of the case respectfully requested.

Respectfully Submitted

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